CALIFORNIA REGULATIONS FOR 2001 AND LATER MODEL GASOLINE SPARK-IGNITION MARINE ENGINES

Adopted: _____

Proposed Regulation Order

Add Title 13, California Code of Regulations, Chapter 9 Off-Road Vehicles and Engines Pollution Control Devices, sections 2440 through 2447 to read as follows:

Article 4.5. Gasoline Spark-Ignition Marine Engines

§2440. Applicability.

(a) (1) This article applies to model year 2001 and subsequent model year gasoline spark-ignition (SI) marine engines used to propel marine vessels as defined in the General Provisions of the United States Code, 1 U.S.C.3 (1992), unless otherwise indicated.

(2) Sterndrive and inboard engines are exempt from this article.

(3) Every new gasoline spark-ignition marine engine that is manufacturered for sale, sold, or offered for sale in California, or that is introduced, and delivered or imported into California for introduction into commerce, and which is subject to any of the standards prescribed in this article must be covered by an Executive Order, issued pursuant to this article.

(b) Each part of this article is severable, and in the event that any part of this chapter is held to be invalid, the remainder of this article remains in full force and effect.

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

§2441. Definitions.

(a) Definitions in Section 1900 (b), Division 3, Chapter 9, Title 13 of the California Code of Regulations, apply with the following additions:

(1) “ARB Enforcement Officer” means any officer or employee of the Air Resources Board so designated in writing by the Executive Officer or by the Executive Officer’s designee.

(2) “Assembly-Line Tests” are those tests or inspections that are performed on or at the end of the assembly-line.

(3) "Capture rate" means the percentage of in-use engines subject to recall which must be corrected to bring the class of engines into compliance. The number of engines subject to recall shall be based on the actual number of engines in use as verified by the Department of Motor Vehicles registration records, or engine registration records compiled and prepared by industry, or a comparable source as determined by the Executive Officer at the time a recall is initiated.

(4) “Certification” means, with respect to new gasoline SI marine engines, obtaining a Executive Order for an engine family complying with the gasoline SI marine engine emission standards and requirements specified in Section 2442.

(5) “Corporate Averaging” means the exchange of emission reduction credits among engine families within a given manufacturer’s product line.

(6) “Emission control system” means any device, system, or element of design that controls or reduces the emission of substances from an engine.

(7) “Emission Reduction Credit” means the amount of emission reduction or exceedance, by an engine family, below or above the applicable HC+NOx emission standard, respectively. Manufacturer designated emission standards (STDs) below the standard create “positive credits,” while STDs above the standard create “negative credits.”

(8) " Enforcement test results" means data or information gathered through enforcement programs conducted by the Air Resources Board. These programs include, but are not limited to, field inspections, compliance testing, assembly-line testing.

(9) “Engine family” means a group of engines as specified in Section 2442.

(10) “Engine identification number” means a unique specification (for example, model number/serial number combination) that allows a particular gasoline SI marine engine to be distinguished from other similar engines.

(11) “Exhaust emissions” means matter emitted into the environment from any opening downstream from the exhaust port of a gasoline SI marine engine.

(12) "Executive Officer" means the Executive Officer of the Air Resources Board or his or her authorized representative.

(13) “Executive Order” means **<ADD DEFINITION>**

(14) “Fuel system” means all components involved in the transport, metering, and mixture of the fuel from the fuel tank to the combustion chamber(s) including, but not limited to the following: fuel tank, fuel tank cap, fuel pump, fuel lines, oil injection metering system, carburetor or fuel injection components, and all fuel system vents.

(15) “Gasoline spark-ignition marine engine” means any engine used to propel a marine vessel, which utilizes the spark-ignition (SI) combustion cycle.

(16) “Inboard Engine” means a four stroke gasoline SI marine engine that is designed such that the propeller shaft penetrates the hull of the marine vessel while the engine and the remainder of the drive unit is internal to the hull of the marine vessel.

(17) "Influenced Emission Recall" means an inspection, repair, adjustment or modification program initiated and conducted by a manufacturer or its agent or representative as a result of in-use enforcement testing or other evidence of noncompliance provided to or required by the Board, to remedy any nonconformity for which direct notification of vehicle or engine owners is necessary.

(18) “Manufacturer designated emission standard” means an emission value assigned by a marine engine manufacturer to an engine family for the purpose of complying with a corporate average exhaust emission standard. The manufacturer designated emission standard (STDjx) must not exceed the limit specified by the ARB.

(19) “Marine engine manufacturer” means any person engaged in the manufacturing or assembling of new gasoline SI marine engines or the importing of such engines for resale, or who acts for and is under the control of any such person in

connection with the distribution of such engines. A gasoline SI marine engine manufacturer does not include any dealer with respect to new gasoline SI marine engines received by such person in commerce.

(20) “Marine vessel” means every description of watercraft or other artificial contrivance used, or capable of being used, as a means of transportation on water, as defined in 1 U.S.C. 3 (1992).

(21) “Model year” means the manufacturer’s annual new model production period which includes January 1 of the calendar year for which the model year is named, ends no later than December 31 of the calendar year, and does not begin earlier than January 2 of the previous calendar year. Where a manufacturer has no annual new model production period, model year means the calendar year.

(22) “New”, for purposes of Section 2440 through 2446, means a nonroad engine, nonroad vehicle or nonroad equipment the equitable or legal title to which has never been transferred to an ultimate purchaser. Where the equitable or legal title to the engine, vehicle or equipment is not transferred to an ultimate purchaser until after the engine, vehicle or equipment is placed into service, then the engine, vehicle, or equipment will no longer be new after it is placed into service. A non road engine, vehicle, or equipment is placed into service when it is used for its functional purposes. With respect to imported nonroad engines, nonroad vehicles, or nonroad equipment, the term “new” means an engine, vehicle or piece of equipment that is not covered by an Executive Order issued under this Article at the time of importation, and that is manufactured after the effective date of a regulation issued under this Article which is applicable to such engine, vehicle or equipment, or which would be applicable to such engine, vehicle, or equipment had it been manufactured for importation into the United States.

(23) "Nonconformity" or "Noncompliance" exists whenever:

(A) a significant number of a class of engines, although properly maintained and used, experience a failure of the same emission-related component within their useful lives which, if uncorrected, results in the engines' failure to meet the applicable standards; or

(B) a class of engines that at any time within their useful lives, although properly maintained and used, on average does not comply with the emission standards prescribed under Section 2442 which are applicable to the model year of such engines.

(24) “Nonroad engine” has the meaning defined in 40 CFR 89.2

(25) “Nonroad vehicle” has the meaning defined in 40 CFR 89.2

(26) “Nonroad equipment” has the meaning defined in 40 CFR 89.2

(27) "Ordered Emission Recall" means an inspection, repair, adjustment or modification program required by the Board and conducted by the manufacturer or its agent or representative to remedy a nonconformity for which direct notifications of engine owners is necessary.

(28) “Original Equipment Manufacturer” means **<Insert Definition>**

(29) “Outboard engine” is a marine SI engine that, when properly mounted on a marine vessel in the position to operate, houses the engine and drive unit external to the hull of the marine vessel.

(30) “Personal watercraft engine (PWC)” are all gasoline SI marine engines that do not meet the definition of outboard engine, inboard engine or sterndrive engine, except that the Executive Officer in his or her discretion may classify a PWC as an inboard or sterndrive engine if it is comparable in technology and emissions to an inboard or sterndrive engine.

(31) “Production-Line Tests” are those tests or inspections that are performed on or at the end of the assembly line.

(32) “Scheduled maintenance” means any adjustment, repair, removal, disassembly, cleaning, or replacement of components or systems required by the manufacturer to be performed on a periodic basis to prevent part failure or marine vessel or engine malfunction, or those actions anticipated as necessary to correct an overt indication of malfunction or failure for which periodic maintenance is not appropriate.

(33) “Sterndrive engine” means a four stroke marine SI engine that is designed such that the drive unit is external to the hull of the marine vessel, while the engine is internal to the hull of the marine vessel.

(34) “Test engine” means the engine or group of engines that a manufacturer uses during certification, production line and in-use testing to determine compliance with emission standards.

(35) “Ultimate purchaser” means, with respect to any new gasoline SI marine engine the first person who in good faith purchases such new gasoline SI marine engine for purposes other than resale.

(36) "Useful life" for gasoline SI marine engines means five years or 350 hours for personal watercraft and 6 years or 350 hours for an outboard engine.

(37) "Voluntary Emission Recall" means an inspection, repair, adjustment or modification program voluntarily initiated and conducted by a manufacturer or its agent or representative to remedy any nonconformity for which direct notification of engine owners is necessary.

(38) “Warranty period” means the period of time the engine or part is covered by the warranty provisions.

(39) "Warranty station" means any dealer, service center or other agent that is authorized by the engine manufacturer to perform diagnostic labor, repairs or replacements of warranted engine components.

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013 and 43018, Health and Safety Code.

§2442 Emission Standards

(a) Exhaust emissions from new, gasoline SI marine engines manufactured for sale, sold, or offered for sale in California, or that are introduced, delivered or imported into California for introduction into commerce must not exceed the hydrocarbon plus oxides of nitrogen (HC+NOx) exhaust emission standards listed in Table 1 during its designated useful life:

Table 1

Corporate Average Emission Standards by Implementation Date HC+NOx (g/kW-hr)			
Category	Model Year 2001	Model Year 2004	Model Year 2007
Outboards less than or equal to 75 kW	20 (40)[1]	17 (40)[1]	13 (27)[1]
Outboards greater than 75 kW	40 (134)[1]	27 (80)[1]	13 (40)[1]
Personal Watercraft	40 (134)[1]	27 (80)[1]	13 (40)[1]

Where power (kW) is the average power of an engine family in kW. The power of each configuration is the rated output in kilowatts as determined by SAE, which is incorporated herein by reference.

(b) Compliance with the standards on a corporate average basis shall be determined as follows:

$$\frac{\sum_{j=1}^{n}(PRODjx)(STDjx)}{\sum_{j=1}^{n}(PRODjx)} = STDca$$

where:

n = total number of engine families (by category)

PRODjx = number of units of each engine family j produced for sale in California in model year x.

STDjx = the manufacturer designated HC+NOx exhaust emission standard for

[1] For each engine family, the manufacturer designated exhaust emission standard (STDjx) for corporate averaging shall not exceed the value in parentheses.

engine family j in model year x, which must be determined by the engine manufacturer subject to the following conditions: (1) no individual engine family exhaust emission standard shall exceed the maximum allowed value as specified in footnote 1; (2) no engine family designation or engine family exhaust emission standard shall be amended in a model year; and (3) prior to sale or offering for sale in California, each engine family shall be certified in accordance with Section 2447 and shall be required to meet the engine manufacturer's designated HC+NOx exhaust emission standard as a condition of the Executive Order. Prior to certification, the engine manufacturer shall also submit estimated production volumes for each engine family to be offered for sale in California.

STDca = An engine manufacturer's corporate average HC+NOx exhaust emissions from those California gasoline SI marine engines subject to the California corporate average HC+NOx exhaust emission standard, as established by an Executive Order certifying the California production for the model year. This Executive Order must be obtained prior to the issuance of certification Executive Orders for individual engine families for the model year and shall include, but not be limited to the following requirements:

(1) During engine manufacturer's production year, for each engine family, the manufacturer shall provide the following information to the Executive Officer within thirty (30) days after the last day in each calendar quarter:
   (A) Engine Identification numbers for outboard engines or California hull identification numbers for personal watercraft and an explanation of the identification code; and
   (B) The total number of gasoline SI marine engines produced for sale in California and their applicable designated HC+NOx exhaust emission standard.

(2) The engine manufacturer's average HC+NOx exhaust emissions must meet the corporate average standard at the end of the engine manufacturer's production for the model year.

(3) Production and sale of engines which result in non-compliance with the California standard for the model year shall cause an engine manufacturer to be subject to revocation or suspension of Executive Orders for the applicable engine families, enjoined from any further sales, or distribution, of such noncompliant engine families, in the State of California pursuant to Section 43017 of the Health and Safety Code. Before seeking remedial action against the engine manufacturer, the Executive officer will consider any information provided by

the equipment manufacturer. All excess emissions resulting from non-compliance with the California standard must be made up in the following model year.

(4) For a period of up to one year following the end of the model year, for each model the engine manufacturer shall submit California sales and registration data ninety (90) days after each quarter in the model year.

(c) The test procedures for determining compliance with these standards are set forth in Parts III and IV of the " California Exhaust Emission Standards and Test Procedures for 2001 and Later Gasoline Spark-Ignition Marine Engines," adopted <Date>.

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

§2443.1 Emission Control Labels and Engine Identification Number - Model Year 2001 and Later Gasoline SI Marine Engines

(a) Purpose. The Air Resources Board recognizes that certain emissions-critical or emissions-related parts must be properly identified and maintained to ensure that engines meet the applicable emission standards. The purpose of this section is to require engine manufacturers to affix a label (or labels) on each production engine (or vessel, as applicable) to provide the engine owner and service mechanic with information necessary for the proper maintenance of these parts in customer use. These specifications shall also require the engine manufacturer to permanently identify the engine with a unique identification number that will be used for enforcement purposes, including in-use testing.

(b) Applicability. This specifications apply to:

(1) Model year 2001 and later gasoline SI marine engines, which have been certified to the applicable emission standards pursuant to Health and Safety Code Section 43013;

(2) Engine manufacturers and original equipment manufacturers, as applicable, that have certified such engines; and

(3) Original equipment manufacturers, regardless of whether they have certified the engine, if their vessel obscures the emission control labels of such certified engines.

(c) Engine Label and Location.

(1) A plastic or metal tune-up label must be welded, riveted or otherwise permanently attached by the engine manufacturer to an area of the engine (e.g., block or crankcase) in such a way that it will be readily visible to the average person after installation of the engine in the vessel. If such an attachment is not feasible, the Executive officer may allow the label to be attached on components of the engine or vessel assembly (as applicable) that satisfy the requirements of Subsection (c)(2). Such labels must be attached on all engine assemblies (incomplete and complete) that are produced by an engine manufacturer.

(2) In selecting an acceptable location, the engine manufacturer must consider the possibility of accidental damage (e.g., possibility of tools or sharp instruments coming in contact with the label). Each engine label must be affixed in such a manner that it cannot be removed without destroying or defacing the label, and

must not be affixed to any engine (or vessel, as applicable) part that is likely to be replaced during the engine's (or vessel's, as applicable) useful life that is not integral to the engine's operation. The engine label must not be affixed to any engine (or vessel, as applicable) component that is easily detached from the engine. If the engine manufacturer claims there is inadequate space to attach the label, the Executive officer will determine a suitable location.

(3) The engine label information must be written in the English language and use block letters (i.e., sans serif, upper-case characters) except for units of measurement, which may be sans serif, lower-case characters. The characters must be of a color that contrasts with the background of the label.

(4) The engine label must contain the following information:
- (A) The heading "EMISSION CONTROL INFORMATION."
- (B) The full corporate name and trademark of the engine manufacturer.
  - (i) An engine manufacturer may request the Executive Officer's approval to delete its name and trademark, and substitute the name and trademark of another engine manufacturer, original equipment manufacturer or third-party distributor.
  - (ii) Approval under Paragraph (4)(B)(I) above must not relieve the engine manufacturer granted an engine family Executive Order of any requirements imposed by these provisions on the applicable engines.
- (C) The statement, "THIS (VESSEL'S ENGINE or ENGINE, as applicable) IS CERTIFIED TO OPERATE ON (specify operating fuel(s))."
- (D) Identification of the Exhaust Emission Control System (Abbreviations may be used and must conform to the nomenclature and abbreviations provided in the latest revision of the Society of Automotive Engineer's procedure J1930, "Electrical/Electronic Systems Diagnostic Terms, Definitions, Abbreviations and Acronyms", and as specified in Section 1977, Title 13, California Code of Regulations.
- (E) Any specific fuel or engine lubricant requirements (e.g., fuel-oil ratio(s), lead content, research octane number, engine lubricant type).
- (F) Date of manufacture (day (optional), month and year).
- (G) An unconditional statement of compliance with the appropriate model year California regulations. For example, "THIS ENGINE CONFORMS TO (model year) CALIFORNIA EMISSION REGULATIONS FOR GASOLINE SPARK-IGNITED MARINE ENGINES AND IS CERTIFIED TO (specify designated hydrocarbon plus oxides of nitrogen standard) g/bhp-hr HC+NOx ENGINE FAMILY EXHAUST EMISSION STANDARD IN CALIFORNIA."
- (H) The engine family identification (i.e., engine family name).

(I) Engine displacement (in cubic centimeters) of the individual engine upon which the engine label if affixed.

(J) The maintenance specifications and adjustments recommended by the engine manufacturer, including, as applicable: valve lash, ignition timing, idle air/fuel setting procedure and value (e.g., idle speed drop), high idle speed and spark plug gap. These specifications must indicate the proper transmission position, if applicable, during tune-up and what accessories, if any, should be in operation, and what systems, if any (e.g., vacuum advance, battery, air pump), should be disconnected during the tune-up. If the engine manufacturer does not recommend adjustment of the foregoing specifications, the engine manufacturer may substitute in lieu of the specifications, the single statement, "NO OTHER ADJUSTMENTS NEEDED." For all engines, the instructions for tune-up adjustments must be sufficiently clear on the engine label to preclude the need for a mechanic or equipment owner to refer to another document in order to correctly perform the adjustments.

(5) If there is insufficient space on the engine to accommodate an engine label that contains all of the information required in Subsection (4) above, the Executive officer may allow the engine manufacturer to modify the engine label as follows:

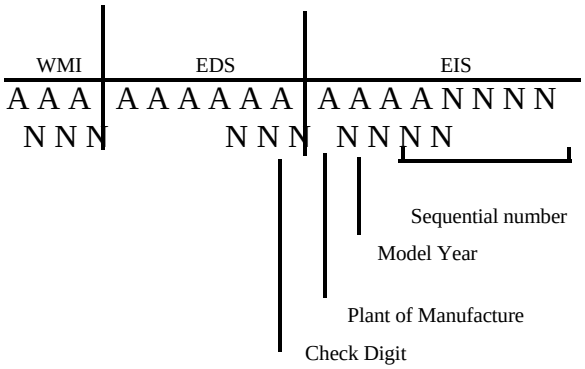
(A) Exclude the information required in Subsections (4)(C), (D) and (E) from the engine label. This information must be specified elsewhere on the engine, or in the owner's manual.

(B) Substitute the information required in Subsection (4)(J) with the statement, "REFER TO THE OWNER'S MANUAL FOR MAINTENANCE SPECIFICATIONS AND ADJUSTMENTS." When such a statement is used, the information required by Subsection (4)(J) must be specified in the owner's manual.

(C) Exclude the information required by Subsection (4)(F) on the engine label if the date the engine was manufactured is stamped or labeled permanently on the engine (e.g., within the serial number), and this date is readily visible.

(d) An engine label may state that such engine conforms to any other applicable state or federal emission standards for new gasoline SI marine engines; or any other information that the engine manufacturer deems necessary for, or useful to, the proper operation and satisfactory performance of the engine.

(e) Engine Identification Number. The engine manufacturer must identify each outboard and personal watercraft engine with a permanently affixed or stamped 17-character, identification number that is readily visible. The format shall be as follows:



A = Alpha
N = Numeric

where:

WMI (World Manufacturer Identifier) = consists of three characters assigned to the marine engine manufacturer in accordance with SAE Recommended Practice J1044a, World Manufacturer Identifier, incorporated herein by reference.

EDS (Engine Descriptor Section) = identifies the certification status and general attributes of the vessel/engine as follows:

CHARACTER	DESIGNATION
4	**Certification Status** ("C" = if California-Certified; otherwise, any other letter, except "I" or "O".)
5	**Green Labeling** ("B" = 15-25%< CAP std; "S" = 26-50%< CAP std.; "G"= greater than 51%< CAP std.; "R" = competition vehicle)
6	**Engine Category** (i.e., outboard ("B") or personal watercraft ("P")
7	**Engine Type** (i.e., 4-stroke, 2-stroke, 2-stroke w/DFI, catalyst, etc.)
8	**Model Designation** (Character is determined by mfr.)
9	**Check Digit**

The check digit is used to verify the EIN transcription. After all other characters in VIN have been determined by the manufacturer, the check digit is calculated as follows:

1. Assign to each number in the VIN/EIN its actual mathematical value and assign to each letter the value specified for it (See below).

A=1	J=1	T=3
B=2	K=2	U=4
C=3	L=3	V=5
D=4	M=4	W=6
E=5	N=5	X=7
F=6	P=7	Y=8
G=7	R=9	Z=9
H=8	S=2	

2. Multiply the assigned value for each character in the VIN by the position weight (See below).

1st....8	10th...9
2nd...7	11th...8
3rd...6	12th...7
4th...5	13th...6
5th...4	14th...5
6th...3	15th...4
7th...2	16th...3
8th...10	17th...2
9th (check digit)...0	

3. Summate the resulting products and divide the total by 11.

4. The numerical remainder is the check sum digit. If the remainder is 10, the letter "X" shall be used as the check digit.

EIS (Engine Indicator Section) = includes the model year, plant of manufacture, and the engine's sequential production number. The recommended code for designating the model year is indicated in J272c, incorporated herein by reference.

(f) Supplemental Engine Label Content and Location.

(1) When a final engine, equipment, or vessel assembly that is marketed to any ultimate purchaser is manufactured and the engine label affixed by the engine manufacturer is not readily visible, the manufacturer of the final engine, equipment or vessel assembly (i.e., original equipment manufacturer) must affix a supplemental engine label upon the engine, equipment or vessel. The supplemental label must be made of plastic or metal, and must be welded, riveted or otherwise affixed permanently to an area of the engine, equipment or vessel so as to be readily visible.

(2) The manufacturer required to affix a supplemental label must consider the possibility of accidental damage to the supplemental engine label in the determination of the label location. Such a label must not be attached to any engine, equipment or vessel component that is likely to be replaced during the useful life of the engine, equipment or vessel (as applicable), and/or is not integral to the engine's operation. Such a label must not be attached to any engine or equipment component that is easily detached from the engine, equipment or vessel (as applicable).

(3) The supplemental engine label must conform to the engine label requirements in Subsections (c)(3) and (4), except that the date of manufacture specified in Subsection (c)(4)(F) may be deleted from the supplemental engine label. When the date of engine manufacture does not appear on the supplemental engine label, the responsible original equipment manufacturer must display (e.g., label, stamp, etc.) the date elsewhere on the engine, equipment or vessel so as to be readily visible. The original equipment manufacturer must also display the engine identification number elsewhere on the engine that is readily visible if the original number is obscured by the equipment manufacturer's equipment.

(g) As used in these specifications, readily visible means that a label is readable by an average person from a distance of 46 centimeters (18 inches) without any obstructions from equipment, vessel or engine parts (including all engine manufacturer or original equipment manufacturer (as applicable) available optional equipment) except for flexible parts (e.g., vacuum hoses, ignition wires) that can be moved out of the way without disconnection. Alternatively, the label and engine identification information required by these specifications must be no smaller than two (2) millimeters in height (with the exception of units of measurement) provided that no equipment or engine parts (including all manufacturer available optional equipment), except for flexible parts, obstruct the label(s).

(h) The label(s), engine identification number(s) and any adhesives used must be designed to withstand, for the engine's or vessel's useful life, typical environmental conditions in the area where the label(s) required by this Section are affixed. Typical equipment environmental conditions include, but are not limited to, exposure to extreme heat or cold, engine fuels, lubricants and coolants (e.g., gasoline, motor oil, saltwater, ethylene glycol). The engine manufacturer must submit, with its certification application, a statement attesting that its labels and engine identification numbers comply with these requirements.

(i) The engine manufacturer must obtain approval from the Executive officer for all label and engine identification number formats and locations in conjunction with the engine family certification. Approval of specific maintenance settings on labels is not required; however, the format for all such setting and tolerances, if any, is subject to review. If the Executive Officer finds that the information on the label or engine identification number is vague or subject to misinterpretation, or that the location does not comply with these specifications, the Executive Officer may require that the label(s), engine identification number(s) or location(s) be modified accordingly.

(j) Samples of all actual production labels used within an engine family must be submitted to the Executive Officer within thirty days after the start of production. Engine manufacturers must provide samples of their own applicable production labels, and

samples of applicable production original equipment manufacturer labels that are accessible to the engine manufacturers due to the direct market arrangement between such manufacturers.

(k) The Executive Officer may approve alternate label and engine identification number locations. The Executive Officer may also, upon request, waive or modify the label content requirements provided that the intent of this Section is met.

(l) (1) If the Executive Officer finds any engine manufacturer using labels and engine identification numbers that are different from those approved or do not substantially comply with the readability or durability requirements set forth in these specifications, the engine manufacturer will be subject to revocation or suspension of Executive Orders for the applicable engine families, enjoined from any further sales, or distribution, of such noncompliant engine families, in the State of California pursuant to Section 43017 of the Health and Safety Code. Before seeking remedial action against the engine manufacturer, the Executive officer will consider any information provided by the equipment manufacturer.

(2) If the Executive Officer finds any original equipment manufacturer using labels for which it has responsibility for attaching that are different from those approved or that do not substantially comply with the readability or durability requirements set forth in these specifications, the equipment manufacturer will be subject to being enjoined from any further sales or distribution, of applicable equipment product line that uses noncompliant labels in the State of California pursuant to Section 43017 of the Health and Safety Code. Before seeking remedial action against the equipment manufacturer, the Executive officer will consider any information provided by the equipment manufacturer.

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

§2443.2 Consumer/Environmental Label Requirements

(a) If an engine manufacturer has certified an engine family to an STDjx at or below the corporate average exhaust emission level designated in Section 2442 (a), Table 1, the engine manufacturer (or equipment/vessel manufacturer who uses such engines) must choose to promote the engine family as an ARB-certified clean engine, as described in this Section. If the engine family fails production line testing and corrective action is not taken, the manufacturer must cease any representation of an engine as an ARB-certified clean engine. In this case, corrective action refers only to physical changes made to bring the engine into compliance with their original STDjx. Any use of the icon described below counter to the requirements set forth herein will be considered a violation of this section.

(1) The ARB icon is shown here. **<insert graphic icon>**

(2) The ARB icon may only be used on permanently affixed labels visible during consumer operation, and in printed promotional materials. Removable labels which remain intact after removal are prohibited.

(3) **<Location and Size to be determined>**

(4) Labels may only be affixed to the watercraft or engine by the manufacturer. The manufacturer may not make labels available to consumers or dealers as an aftermarket part.

(5) **<Multiple Levels of cleanliness>**

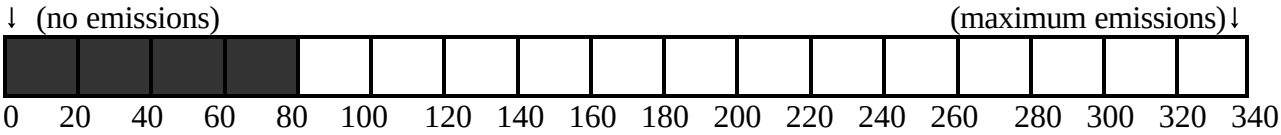
NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

§2443.3 Emissions Performance Consumer Notification Requirements

(a) A nonpermanent label must be attached to the vessel at time of sale that includes the following:

(1) The smog index for the engine and information to inform purchasers of the significance of the smog index. This explanatory information may take the following form:

The Smog Index of this vessel is
80



Note: The Smog Index indicates the relative level of pollutants the vessel emits. The lower the Smog Index, the lower the emissions.

(2) An alternative label may be used if shown to yield equivalent clarity and if approved in advanced by the Executive Officer.

(3) The Smog Index value is calculated by the equation below:

$$\frac{STDjx}{CAS} \times 100 = SI$$

Where:

STDjx	=	the manufacturer designated HC+NOx exhaust emission standard for the engine
CAS	=	the corporate average exhaust emission standard as designated in Section 2442 (a) Table 1
SI	=	the Smog Index.

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

§2444. In-Use Compliance Testing and Recall Regulations -- Model Year 2001 and Later Gasoline SI Marine Engines

(a) Applicability. This section shall apply to model year 2001 and later gasoline spark-ignition marine engines, which have been certified to the applicable emission standards pursuant to Health and Safety Code Section 43013.

(b) Manufacturer In-Use Compliance Test Procedures.

(1) For the purposes of this section, the Air Resources Board will accept emission data collected from the in-use testing program implemented by the United States Environmental Protection Agency as specified in Title 40, Code of Federal Regulations, Section 91.803, which is incorporated herein by reference.

(2) Maintenance, procurement and testing of in-use engines shall be conducted pursuant to Title 40, Code of Federal Regulations, Section 91.804, incorporated herein by reference, except that the test procedures to be used on in-use engines shall be in accordance with those specified in Part IV of Title 13, California Code of Regulations, Section 4227. Documentation of the procurement process, parameter adjustments and all maintenance must be maintained as required by Title 13, California Code of Regulations, Section 4227, Part I (14).

(3) The Executive Officer, may, upon notice to the manufacturer, prescribe that a California-specific in-use test program be conducted at the manufacturer's expense if:
(A) The results obtained from the federal in-use test program pursuant to Paragraphs (a)(1) and (2) of this Section are determined not to be representative of engines sold and operated in California; or ,
(B) The necessity is supported by other data or information (e.g., California-only engine families).

(c) Reports and Evaluation

(1) The manufacturer must maintain and submit sufficient records to the Executive Officer within one month of completion of testing from the in-use program. These records must include, but need not be limited to, the following for each test engine:
(A) Engine family.
(B) Engine model.
(C) Engine identification number.
(D) Date of manufacture.
(E) Estimated hours of use.

(F) Date and time of each test attempt.
(G) Results (if any) of each test attempt.
(H) Results of all emission testing.
(I) Summary of all maintenance and/or adjustments performed.
(J) Summary of all modifications and/or repairs.
(K) Determinations of noncompliance and probable causes of failure.
(L) Description of operating and storage conditions.

(2) If the results of the in-use emission tests indicate that the average emissions of the test vehicles for any pollutant exceed the applicable emission standards specified in Title 13, California Code of Regulations, Section 2442, the entire engine population so represented shall be deemed to exceed the standards. The Executive Officer shall notify the manufacturer of the test results and upon receipt of the notification, the manufacturer shall have 45 days to submit a voluntary or influenced recall plan in accordance with the applicable portions of Paragraphs (d) and (e). If no recall plan is submitted, the Executive Officer may prescribe the implementation of an ordered recall pursuant to the applicable portions of Paragraph (d) and (e). In-use noncompliance may not be remedied through implementation of the federal in-use credit program.

(d) Initiation of In-Use Engine Voluntary, Influenced and Ordered Recalls

(1) When a manufacturer initiates a voluntary emission recall campaign, the Executive Officer shall be notified of the recall at least thirty (30) days before owner notification is to begin. The manufacturer shall also submit a voluntary recall plan for approval, as described in Paragraph (e) below. A voluntary recall plan shall be deemed approved by the Executive officer within thirty (30) days after receipt of the recall plan.

(2) (A) When any manufacturer, based on enforcement test results or any other information provided to or required by the ARB, proposes to initiate a voluntary or influenced emission recall program, or is required to initiate an ordered recall program, the manufacturer shall submit for approval by the Executive Officer an influenced emission recall plan as described in Paragraph (e) below. The plan shall be submitted within 45 days following the receipt of a notification from the ARB that enforcement test results or other information demonstrate an engine noncompliance.
(B) The Executive Officer shall approve the recall plan in writing if it contains the information specified in Paragraph (e) where specified and is designed to notify the engine owner and correct the noncompliance in an expeditious manner. Notification of engine owners and the implementation of recall repairs shall commence no later than the schedule specified under

paragraph e(1)(C) and e(1)(D), unless the manufacturer can show good cause for the Executive Officer to extend the deadline. If the plan does not contain the provisions of Paragraph (e), the Executive Officer shall disapprove the plan in writing and require revisions where deemed necessary. The manufacturer may contest such a disapproval by requesting a hearing pursuant to Sections 60040 to 60053, Title 17, California Code of Regulations. If no request for a hearing is made or the hearing upholds the disapproval, the manufacturer shall incorporate all requested revisions to the plan and begin implementation of the recall plan within sixty (60) days of receipt of the disapproval.

(C) The manufacturer may also request a public hearing pursuant to the procedures set forth in Sections 60040 through 60053, Title 17, California Code of Regulations to contest the finding of nonconformity and the need for an ordered recall. If such a hearing occurs and the nonconformity is confirmed therefrom, the manufacturer shall submit the recall plan required by Paragraph e (3) within thirty (30) days after receipt of the Board's decision unless an extension is granted by the Executive Officer.

(e) Voluntary, Influenced and Ordered Recall Plans

(1) The recall plan for voluntary, influenced and ordered recalls must be submitted to the Executive Officer for review and must contain the following information unless otherwise specified:

(A) A description of each class or category of engines recalled, including the number of engines to be recalled, the model year, and such other information as may be required to identify the engines recalled;

(B) A description of the specific modifications, alterations, repairs, corrections, adjustments or other changes to be made to correct the engines affected by the emission-related defect;

(C) A description of the method by which the manufacturer will notify engine owners including copies of any letters of notification to be sent to engine owners;

(D) A description of the procedure to be followed by engine owners to obtain correction of the nonconformity. This may include the date on or after which the owner can have the nonconformity corrected, the time reasonably necessary to perform the labor to correct the nonconformity and the designation of facilities at which the nonconformity can be remedied;

(E) A description of the class of persons other than dealers and authorized warranty agents of the manufacturer who will remedy the defect;

(F) A description of the system by which the manufacturer will assure that an adequate supply of parts is available to perform the repair under the plan, including the date by which an adequate supply of parts will be available to

initiate the repair campaign, and the method to be used to assure the supply remains both adequate and responsive to owner demand.

(G) A copy of the letter of notification to be sent to vessel or engine owners;

(H) A copy of all necessary instructions to be sent to those persons who are to perform the repair;

(2) (A) Under an influenced recall, an estimate of the capture rate from the proposed recall derived from actual data and/or manufacturer experience must also be provided. A 60 percent capture rate shall be assigned for recalls based exclusively on noncompliance caused by a failure of an emission-related component.

(B) Under an influenced recall based on noncompliance caused by a failure to meet the applicable standards, the manufacturer must also provide a description that contains the following:

(i) Average noncompliance emission level;

(ii) Average emission reduction per pollutant resulting from applying the recall repair on two or more in-use engines representing the average noncompliance emission level; and

(iii) An estimate of the average emission level per pollutant for the class of engines after repair as corrected by the estimated capture rate.

(3) For an ordered recall, the recall plan shall include the information required for voluntary and influenced recall plans as specified in Paragraphs e(1) and e(2)(B)(i-iii). Additionally, it shall include the following:

(A) The capture rate required for each class of engine to be recalled. For recall based on exceedance of emission standards, the capture rate shall be calculated using the following formula:

$$\frac{(Ef - Es) \times 100}{\Delta} = R$$

Where:

R = capture rate

Δ = average reduction per engine resulting from the recall repair

Ef = average noncompliance HC+NOx emission level determined from in-use enforcement testing.

Es = designated HC+NOx emission standard.

An 80 percent capture rate is required for recalls based on the failure of an emission-related component.

(B) The plan shall include a schedule for implementing actions to be taken including identified increments of progress towards implementation and

deadlines for completion of each increment. If, after good faith efforts, the manufacturer cannot reach the required capture rate by the applicable deadline, the manufacturer shall propose mitigation efforts to be approved by the Executive Officer that will offset the emissions of the unrepaired engines.

(4) The manufacturer must not condition repair of the noncomplying engine/vessel on the proper maintenance or use of the engine except for compelling reasons approved by the Executive Officer. The manufacturer, however, is not obligated to repair a component which has been removed or modified.

(5) Repair Label. The manufacturer must require those who perform the repair to affix a label to each repaired engine. The label shall be placed in a location approved by the Executive Officer and be constructed of a material that can withstand typical equipment environmental conditions. The label shall contain the recall campaign number and a code designation indicating the facility at which the repair was performed.

(6) Proof of Correction Certificate. The manufacturer must require those who perform the repair to provide the engine owner with a certificate, in a format prescribed by the Executive Officer, which indicates that the noncomplying engine has been corrected under the recall program. This requirement shall become effective upon the effective date of a recall enforcement program adopted by the Department of Motor Vehicles which requires such a certificate for registration renewal.

(7) Record keeping and Reporting Requirements.

(A) The manufacturer shall report on the progress of the recall program by submitting reports pursuant to the policy described in ARB Manufacturers Advisory Correspondence #96-08, incorporated herein by reference. Such reports shall be submitted no later than 30 days after the close of each calendar quarter to the Chief, Mobile Source Operations Division, P.O. Box 8001, 9528 Telstar Avenue, El Monte, CA 91734-8001. For each class of engine subject to the recall program, the quarterly report shall contain:

(i) Engine family and emission recall campaign number designated by the manufacturer.

(ii) Date owner notification was begun, and date completed.

(iii) Number of engines involved in the voluntary, influenced or ordered recall campaign.

(iv) Number of engines known or estimated to be affected by the nonconformity and an explanation of how this number was

determined.

(v) Number of engines inspected pursuant to the voluntary, influenced or ordered recall plan.

(vi) Number of inspected engines found to be affected by the nonconformity.

(vii) Number of engines receiving repair under the recall plan.

(viii) Number of engines determined to be unavailable for inspection or repair under the recall plan due to exportation, theft, scrapping or for other specified reasons.

(ix) Number of engines determined to be ineligible for recall action due to removed or modified parts.

(x) A listing of the engine identification numbers (for outboard engines) or California hull identification numbers (for personal watercraft engines) of engines subject to recall but for whose repair the manufacturer has not been invoiced.

(xi) A copy of any service bulletins transmitted to dealers or other authorized repair facilities which pertain to the nonconformity to be corrected and that have not previously been reported.

(xii) A copy of all communications transmitted to engine owners that relate to the nonconformity and that have not previously been submitted.

(B) If the manufacturer determines that any of the information submitted pursuant to (7) above has changed or was incorrect, revised information and an explanation must be submitted. Responses to subsections 7(A)(v),(vi),(vii),(viii) and (ix) above shall be cumulative totals.

(C) The manufacturer shall maintain the names and addresses of engine owners:

(i) To whom notification was given;

(ii) Whose engines were repaired or inspected under the recall plan; and

(iii) Whose engines were determined not to qualify for repair due to removed or modified components.

(D) All reports shall be maintained for not less than one year beyond the useful life of the engines and shall be made available to authorized personnel of the ARB upon request.

(e) Penalties.

(1) Under an influenced or ordered recall, failure of the manufacturer to notify the engine owners and repair the engines in the manner specified in the recall plan shall constitute a violation of Health and Safety Code Section 43105.

(2) No penalty shall be imposed for a manufacturer's failure to meet the estimated

capture rate except for an influenced recall when the 60 percent capture rate is required pursuant to Paragraph e(2)(A), in which case an ordered recall may be required if the Executive Officer determines that the manufacturer did not demonstrate a good faith effort to achieve the necessary capture rate.

NOTE: Authority cited: Sections 39600, 39601, 43013, 43018, 43103 and 43105, Health and Safety Code.
Reference: Sections 43013, 43017, 43018, 43104, 43105 and 43106, Health and Safety Code.

§2445.1 Defects Warranty Requirements for Model Year 2001 and Later Gasoline Spark-Ignition Marine Engines

(a) Applicability. This section shall apply to model year 2001 and later gasoline SI marine engines. The warranty period begins on the date the engine or equipment is delivered to an ultimate purchaser or first placed into service (e.g., a demonstration engine or vessel).

(b) General Emissions Warranty Coverage. The manufacturer of each gasoline spark-ignition marine engine must warrant to the ultimate purchaser and each subsequent purchaser that the engine is:

(1) Designed, built and equipped so as to conform with all applicable regulations adopted by the Air Resources Board pursuant to its authority in Chapters 1 and 2, Part 5, Division 26 of the Health and Safety Code; and

(2) Free from defects in materials and workmanship that cause the failure of a warranted part to be identical in all material respects to that part as described in the engine manufacturer's application for certification.

(c) Warranty Period.

(1) In the case of outboard engines, the warranty period will be a period of use 6 years or 350 hours, whichever first occurs.

(2) In the case of personal watercraft, the warranty period will be a period of 5 years or 350 hours, whichever first occurs.

(d) Subject to the conditions and exclusions of Subsection (g), the warranty on emission-related parts is as follows:

(1) Any warranted part that is not scheduled for replacement as required maintenance in the written instructions required by Subsection (e) must be warranted for the warranty period defined in Subsection (c). If the part fails before the first scheduled replacement, the part must be repaired or replaced by the engine manufacturer according to Subsection (4) below. Any such part repaired or replaced under warranty must be warranted for the remainder of the period before the first scheduled replacement date for the part.

(2) Any warranted part that is scheduled only for regular inspection in the written instructions required by Subsection (e) must be warranted for the warranty period defined in Subsection (c). A statement in such written instructions to the effect of "repair and replace as necessary" will not reduce the period of warranty

coverage. Any such part repaired or replaced under warranty must be warranted for the remaining warranty period.

(3) Any warranted part that is scheduled for replacement as required maintenance in the written instructions required by Subsection (e) must be warranted for the period of time before the first scheduled replacement date for that part. If the part fails before the first scheduled replacement, the part must be repaired or replaced by the engine manufacturer according to Subsection (4) below. Any such part repaired or replaced under warranty must be warranted for the remainder of the period prior to the first scheduled replacement point for the part.

(4) Repair or replacement of any warranted part under the warranty provisions of this article must be performed at a warranty station at no charge to the owner.

(5) Notwithstanding the provisions of Subsection (4), warranty services or repairs must be provided at all manufacturer distribution centers that are franchised to service the subject engines.

(6) The engine owner must not be charged for diagnostic labor that leads to the determination that a warranted part is in fact defective, provided that such diagnostic work is performed at a warranty station.

(7) The engine manufacturer is liable for damages to other engine components proximately caused by a failure under warranty of any warranted part.

(8) Throughout the engine's warranty period defined in Subsection (c), the engine manufacturer must maintain a supply of warranted parts sufficient to meet the expected demand for such parts.

(9) Any replacement part may be used in the performance of any warranty maintenance or repairs and must be provided without charge to the owner. Such use will not reduce the warranty obligations of the engine manufacturer.

(10) Add-on or modified parts that are not exempted by the Air Resources Board may not be used. Such use by the ultimate purchaser will be grounds for disallowing a warranty claim made in accordance with this article. The engine manufacturer will not be liable under this article to warrant failures of warranted parts caused by the use of an add-on or modified part.

(11) The Executive Officer may request and, in such case, the engine manufacturer must provide, any documents that describe that manufacturer's warranty

procedures or policies.

(e) Each manufacturer must provide a copy of the following emission warranty parts list with each new engine, using those portions of the list applicable to the engine.

(1) Fuel Metering System
- (A) Carburetor and internal parts (or fuel injection system)
- (B) Air/fuel ratio feedback and control system
- (C) Cold start enrichment system

(2) Air Induction System
- (A) Controlled hot air intake system
- (B) Intake manifold
- (C) Air Filter
- (D) Turbocharger systems
- (E) Heat riser valve and assembly

(3) Ignition System
- (A) Spark plugs
- (B) Magneto or electronic ignition system
- (C) Spark advance/retard system
- (D) Ignition coil and/or control module
- (E) Ignition wires

(4) Positive Crankcase Ventilation (PCV) System
- (A) PCV valve
- (B) Oil filler cap

(5) Exhaust Gas Recirculation (EGR) System
- (A) EGR valve body, and carburetor spacer if applicable
- (B) EGR rate feedback and control system

(6) Air Injection System
- (A) Air pump or pulse valve
- (B) Valves affecting distribution of flow
- (C) Distribution manifold

(7) Catalyst or Thermal Reactor System
- (A) Catalytic converter
- (B) Thermal reactor
- (C) Exhaust manifold

(8) Miscellaneous Items Used in Above Systems
  (A) Hoses, clamps, fittings, tubing, sealing gaskets or devices, and mounting hardware
  (B) Pulleys, belts and idlers
  (C) Vacuum, temperature, and time sensitive valves and switches
  (D) Electronic Controls

(f) Each engine manufacturer must provide with each new engine written instructions for the maintenance and use of the engine by the owner. The instructions must be consistent with Article 4.5 Sections 2440 through 2447. A copy of the instructions for each engine family must be provided to the Executive Officer upon commencement of its production.

(g) Exclusions.

(1) The repair or replacement of any warranted part otherwise eligible for warranty coverage under Subsection (d) may be excluded from such warranty coverage if the engine manufacturer demonstrates that the engine has been abused, neglected, or improperly maintained, and that such abuse, neglect, or improper maintenance was the direct cause of the need for the repair or replacement of the part.

(2) Engines not equipped with hour meters must be warranted for the specified yearly warranty period.

(3) Except as provided in Subsection (1) above, any adjustment of a component which has a factory installed, and properly operating, adjustment limiting device (such as an idle limiter cap or plug) is eligible for warranty coverage under Subsection (d).

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

§ 2445.2 Emission Control Warranty Statement

(a) Each engine manufacturer must provide a verbatim copy of the following statement with each new 2001 model year and later gasoline SI marine engine, using those portions of the statement applicable to the engine.

CALIFORNIA EMISSION CONTROL WARRANTY STATEMENT
YOUR WARRANTY RIGHTS AND OBLIGATIONS

The California Air Resources Board (and engine manufacturer's name, optional) is pleased to explain the emission control system warranty on your (year)(outboard, or personal watercraft) engine. In California, new (outboard, or personal watercraft) engines must be designed, built and equipped to meet the State's stringent anti-smog standards. (Engine manufacturer's name) must warrant the emission control system on your (outboard, or personal watercraft) engine for the periods of time listed below provided there has been no abuse, neglect or improper maintenance of your (outboard or personal watercraft) engine.

Your emission control system may include parts such as the carburetor or fuel injection system, the ignition system, and catalytic converter. Also included may be hoses, belts, connectors and other emission-related assemblies.

Where a warrantable condition exists, (engine manufacturer's name) will repair your (outboard or personal watercraft) engine at no cost to you, including diagnosis, parts and labor.

MANUFACTURER'S WARRANTY COVERAGE:

Model year 2001 and later (outboard or personal watercraft) engines are warranted for ((6 years or 350 hours), (5 years or 350 hours) or (5 years or 350 hours), respectively), whichever occurs first. However, warranty coverage based on the hourly period is only permitted for engines and personal watercraft equipped with appropriate hour meters. If any emission-related part on your engine is defective under warranty, the part will be repaired or replaced by (engine manufacturer's name).

OWNER'S WARRANTY RESPONSIBILITIES:

- As the (outboard or personal watercraft) engine owner, you are responsible for the performance of the required maintenance listed in your owner's manual. (Engine manufacturer's name) recommends that you retain all receipts covering maintenance on your (outboard or personal watercraft) engine, but (engine manufacturer's name) cannot deny warranty solely for the lack of receipts or your failure to ensure the performance of all scheduled maintenance.

- As the (outboard or personal watercraft) engine owner, you should however be aware that (engine manufacturer's name) may deny you warranty coverage if your (outboard or personal watercraft) engine or a part has failed due to abuse, neglect, improper maintenance or unapproved modifications.

- You are responsible for presenting your (outboard or personal watercraft) engine to a (engine manufacturer's name) distribution center as soon as a problem exists. The warranty repairs should be completed in a reasonable amount of time, not to exceed 30 days.

If you have any questions regarding your warranty rights and responsibilities, you should contact (Insert chosen contact of engine manufacturer) at 1-XXX-XXX-XXXX.

(b) Commencing with the 2001 model year, each engine manufacturer must also provide with each new engine a warranty statement in accordance with Sections 2445.2 (a), (b), and (c) Title 13, California Code of Regulations, that generally describes the obligations and rights of the engine manufacturer and engine owner under this article. Engine manufacturers must also include in the warranty statement a phone number the consumer may use to obtain their nearest franchised service center.

(c) Each engine manufacturer must submit the documents required by Subsections (a) and (b) with the manufacturer's application for new engine certification for approval by the Executive Officer. The Executive Officer may reject or require modifications of the documents to the extent the submitted documents do not satisfy the requirements of Subsections (a) and (b). Approval by the Executive Officer of the documents required by Subsections (a) and (b) will be a condition of certification. The Executive Officer will approve or disapprove the documents required by Subsections (a) and (b) within ninety (90) days of the date such documents are received from the engine manufacturer. Any disapproval must be accompanied by a statement of reasons therefore. In the event of disapproval, the engine manufacturer may petition the Board to review the decision of the Executive Officer.

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

§2446. 2001 and Subsequent Model Year Compliance and Cumulative Sum Production-Line Test Procedures for Spark-Ignited Marine Engines

(a) Compliance Test Procedures.

(1) The Executive Officer may, with respect to any new engine family or subgroup being sold, offered for sale, or manufactured for sale in California, order an engine manufacturer to make available for compliance testing and/or inspection a reasonable number of engines, and may direct that the engines be delivered to the state board at the Haagen-Smit Laboratory, 9528 Telstar Avenue, El Monte, California or where specified by the Executive Officer. The Executive Officer may also, with respect to any new engine family or subgroup being sold, offered for sale, or manufactured for sale in California, have an engine manufacturer compliance test and/or inspect a reasonable number of engines at the engine manufacturer's facility under the supervision of an ARB Enforcement Officer. Engines must be selected at random from sources specified by the Executive Officer according to a method approved by the Executive Officer, that, insofar as practical, must exclude engines that would result in an unreasonable disruption of the engine manufacturer's distribution system. A subgroup may be selected for compliance testing only if the Executive Officer has reason to believe that the emissions characteristics of that subgroup are substantially in excess of the emissions of the engine family as a whole.

(2) For all 2001 and subsequent model year marine engines selected for compliance testing, the selection and testing of engines and the evaluation of data must be made in accordance with the procedures set forth herein.

(3) These procedures are applicable, commencing with the 2001 model year, to any engine family or any subgroup within an engine family selected for compliance testing pursuant to this section.

(4) All testing must be conducted in accordance with the applicable model year certification emission test procedures. Any adjustable engine parameters must be set to values or positions that are within the range available to the ultimate purchaser as determined by the ARB Enforcement Officer. For example, an engine carburetor with an adjustable idle fuel/air mixture must be compliance tested at any mixture position requested by the ARB Enforcement Officer that is within the range of adjustment available to the end-use operator. Engine service accumulation (i.e., break-in) before testing may be performed on test engines to the same extent it is performed on production line testing engines (See Subsection (b)). No break-in or modifications, adjustments, or special preparation or maintenance will be allowed on engines chosen for compliance

testing without the written consent of the Executive Officer. Such consent must not be unreasonably withheld where such adjustment or alteration is required to render the engine testable and reasonably operative.

(5) If the engine manufacturer elects to specify a different break-in or adjustments, they will be performed by the engine manufacturer under the supervision of ARB personnel.

(6) Correction of damage or maladjustment that may reasonably be found to have resulted from shipment of the engine is permitted only after test of the engine, except where 100 percent of the engine manufacturer's production is given that inspection or maintenance by the engine manufacturer's own personnel. The engine manufacturer may request that the engine be repaired from shipping damage, and be retested. If the Executive Officer concurs, the engine may be retested, and the original test results may be replaced by the after-repair test results.

(7) Engines must be randomly chosen from the selected engine family or subgroup. Each chosen engine must be tested according to the "California Exhaust Emission Standards and Test Procedures for 2001 and Later Gasoline Spark-Ignition Marine Engines" ("Emission Standards and Test Procedures"), adopted **(month xx, xxxx)** to determine its emissions. Unique specialty hardware and personnel normally necessary to prepare the engine for the performance of the test as set forth in the Procedures must be supplied by the engine manufacturer within seven days after the request for such specialty hardware or personnel. Failure to supply this unique specialty hardware or personnel may not be used by the engine manufacturer as a cause for invalidation of the subsequent tests.

(8) Engines must be tested in groups of five until a "Pass" or Fail" decision is reached for each pollutant independently for the engine family or subgroup in accordance with the Table 2 below:

Table 2
Pass/Fail Decision Criteria

Number of Engines Tested	Decide “Fail” if “U” is greater than or equal to:	Decide “Pass” if “U” is less than or equal to:
5	2.18	-0.13
10	2.11	0.51
15	2.18	0.88
20	2.29	1.16

where:

$$\frac{\sum_{I=1}^{n}(x_i-\mu_0)}{\left(\sum_{I=1}^{n}(x_i-\mu_0)^2\right)^{0.5}}=U$$

x_i = the projected emissions of one pollutant for the ith engine tested.
μ_o = the applicable model year emission standard for that pollutant.
n = the number of engines tested.

(9) The Executive Officer must find that a group of engines has failed the compliance testing pursuant to the above table if the Executive Officer finds that the average emissions of the engines within the selected engine family or subgroup exceed the applicable calendar year new engine emission standard for at least one pollutant.

(10) If no decision for a pollutant or pollutants can be reached after 20 engines have been tested, the Executive Officer will not make a "Fail" decision for the selected engine family or subgroup on the basis of these 20 tests alone. Under these circumstances the Executive Officer will elect to test 10 additional engines. If the average emissions from the 30 engines tested exceed any one of the exhaust emission standards for which a "Pass" decision has not been previously made, the Executive Officer will render a "Fail" decision.

(11) If the Executive Officer determines, in accordance with the procedures set forth in Subsection (a) that an engine family, or any subgroup within an engine family,

exceeds the emission standards for one or more pollutants, the Executive Officer will: *<note: exploring application of additional penalties for noncompliance throughout this section>*

(A) Notify the engine manufacturer that the engine manufacturer may be subject to revocation or suspension of the Executive Order authorizing sales and distribution of the noncompliant engines in the State of California, of the noncompliant engines in the State of California pursuant to Section 43017 of the Health and Safety Code. Prior to revoking or suspending the Executive Order, the Executive Officer will consider production line test results, if any, and any additional test data or other information provided by the engine manufacturer and other interested parties, including the availability of emission reductions credits to remedy the failure.

(B) Notify the equipment manufacturer that the equipment manufacturer may be subject to revocation or suspension of the Executive Order authorizing sales and distribution of the noncompliant engines in the State of California, of the equipment manufacturer's equipment product line(s) that are, or utilize engines that are, noncompliant with the applicable emission regulations pursuant to Section 43017 of the Health and Safety Code. Prior to revoking or suspending the Executive Order, the Executive Officer will consider production line test results, if any, and any additional test data or other information provided by the equipment manufacturer and other interested parties, including the availability of emissions reduction credits to remedy the failure.

(12) Engines selected for inspection must be checked to verify the presence of those emissions-related components specified in the engine manufacturer's application for certification, and for the accuracy of any adjustments, part numbers and labels specified in that application. If any engine selected for inspection fails to conform to any applicable law in Part 5 (commencing with Section 43000) of Division 26 of the Health and Safety Code, or any regulation adopted by the state board pursuant thereto, other than an emissions standard applied to new engines to determine "certification" as specified in Chapter 9, the Executive Officer will: *<note: exploring application of additional penalties for noncompliance throughout this section>*

(A) Notify the engine manufacturer and may seek to revoke or suspend the Executive Order authorizing sales and distribution of the applicable noncompliant engine families or subgroups within the engine families in the State of California pursuant to Section 43017 of the Health and Safety Code. Before revoking or suspending the Executive Order authorizing sales and distribution of the applicable noncompliant engine families or subgroups within the State of California, the Executive Officer will

consider any information provided by the engine manufacturer and other interested parties, including the availability of emissions reductions credits to remedy the failure.

(B) Notify the equipment manufacturer and may seek to revoke or suspend the Executive Order authorizing sales and distribution in the State of California of the equipment manufacturer's equipment product line(s) that are, or utilize engines that are, noncompliant with the applicable emission regulations pursuant to Section 43017 of the Health and Safety Code. Prior to revoking or suspending the Executive Order authorizing sales and distribution of the applicable noncompliant equipment, the Executive Officer will consider any information provided by the equipment manufacturer and other interested parties, including the availability of emissions reductions credits to remedy the failure.

(b) 2001 and Later Model Year Production-Line Test Procedures

(1) Engine Sample Selection

(A) At the start of each model year, the engine manufacturer will begin to randomly select engines from each engine family with California sales greater than XXX units for production line testing, according to the criteria specified herein. Additional engine sample criteria appear in paragraph (b)(4)(C).

(i) For newly certified engine families: After two engines are tested, the engine manufacturer will calculate the required sample size for the model year according to the Sample Size Equation in paragraph (B) of this section.

(ii) For carry-over engine families: After one engine is tested, the engine manufacturer will combine the test with the last test result from the previous model year and then calculate the required sample size for the model year according to the Sample Size Equation in paragraph (B) of this section.

(B) (i) Engine manufacturers will calculate the required sample size for the model year for each engine family using the Sample Size Equation below. N is calculated from each test result. The number N indicates the number of tests required for the model year for an engine family. N, is recalculated after each test. Test results used to calculate the variables in the Sample Size Equation must be final deteriorated test results as specified in paragraph (b)(3)(C).

$$N = \left[\frac{(t_{95} * \sigma)}{(x - STDix)}\right]^2 + 1$$

where:

N = required sample size for the model year.

t_{95} = 95% confidence coefficient. It is dependent on the actual number of tests completed, n, as specified in the table in paragraph (b)(i)(B)(ii) of this section. It defines one-tail, 95% confidence intervals.

σ = actual test sample standard deviation calculated from the following equation:

$$\sigma = \sqrt{\frac{\sum (X_i - x)^2}{n - 1}}$$

X_i = emission test result for an individual engine

x = mean of emission test results of the actual sample

STDjx = designated emission standard

n = The actual number of tests completed in an engine family

(ii) Actual Number of Tests (n) & 1-tail Confidence Coefficients (t_{95}) are listed in Table 3 below:

Table 3
Actual Number of Tests (n) and 1-tail Confidence Coefficients (t_{95})

n	t_{95}	n	t_{95}	n	t_{95}
2	6.31	12	1.80	22	1.72
3	2.92	13	1.78	23	1.72
4	2.35	14	1.77	24	1.71
5	2.13	15	1.76	25	1.71
6	2.02	16	1.75	26	1.71
7	1.94	17	1.75	27	1.71
8	1.90	18	1.74	28	1.70
9	1.86	19	1.73	29	1.70
10	1.83	20	1.73	30	1.70
11	1.81	21	1.72	∞	1.645

(iii) An engine manufacturer must distribute the testing of the remaining number of engines needed to meet the required sample size N, evenly throughout the remainder of the model year.

(iv) After each new test, the required sample size, N, is recalculated using updated sample means, sample standard deviations and the appropriate 95% confidence coefficient.

(v) An engine manufacturer must continue testing and updating each engine family's sample size calculations according to paragraphs (b)(1)(B)(i) through (b)(1)(B)(iv) of this section until a decision is made to stop testing as described in paragraph (b)(1)(B)(vi) of this section or a noncompliance decision is made pursuant to paragraph (b)(2)(A)(v) of this section.

(vi) If, at any time throughout the model year, the calculated required sample size, N, for an engine family is less than or equal to the actual sample size, n, and the sample mean, x, for each regulated pollutant is less than or equal to the designated emission standard for that pollutant, the engine manufacturer may stop testing that engine family except as required by paragraph (b)(2)(A)(vi).

(vii) If, at any time throughout the model year, the sample mean, x, for any regulated pollutant is greater than the designated emission

standard, the engine manufacturer must continue testing that engine family at the appropriate maximum sampling rate.

(viii) The maximum required sample size for an engine family (regardless of the required sample size, N, as calculated in paragraph (b)(1)(B)(i) of this section) is thirty tests per model year.

(ix) Engine manufacturers may elect to test additional randomly chosen engines. All additional randomly chosen engines tested in accordance with the testing procedures specified in the Emission Standards and Test Procedures must be included in the Sample Size and Cumulative Sum equation calculations as defined in paragraphs (b)(1)(B)(i) and (b)(2)(A)(i) of this section, respectively.

(C) The engine manufacturer must produce and assemble the test engines using its normal production and assembly process for engines to be distributed into commerce.

(D) No quality control, testing, or assembly procedures will be used on any test engine or any portion thereof, including parts and subassemblies, that have not been or will not be used during the production and assembly of all other engines of that family, unless the Executive Officer approves the modification.

(2) Calculation of the Cumulative Sum Statistic

(A) Each engine manufacturer must review the test results using the following procedure:

(i) Engine manufacturers must construct the following Cumulative Sum Equation for each regulated pollutant for each engine family. Test results used to calculate the variables in the Cumulative Sum Equation must be final deteriorated test results as defined in paragraph (b)(3)(C).

$$C_i = \max[0 \ or \ (C_{i-1} + X_i - (STDjx + F))]$$

where:

C_i = The current Cumulative Sum statistic

C_{i-1} = The previous Cumulative Sum statistic. Prior to any testing, the Cumulative Sum statistic = 0 (i.e. $C_0 = 0$)

X_i = The current emission test result for an individual engine

STDjx = designated emission standard

F = $0.25 \times \sigma$

After each test, C_i is compared to the action limit, H, the quantity that the Cumulative Sum statistic must exceed, in two consecutive tests,

before the engine family may be determined to be in noncompliance for purposes of paragraphs (b)(2)(A)(iv) and (b)(2)(A)(v).

H = The Action Limit. It is 5.0 x σ, and is a function of the standard deviation, σ.
σ = is the sample standard deviation and is recalculated after each test.

(ii) After each engine is tested, the Cumulative Sum statistic must be promptly updated according to the Cumulative Sum Equation in paragraph (b)(2)(A)(i) of this section.

(iii) If, at any time during the model year, an engine manufacturer amends the application for certification for an engine family as specified in Part **X**, Sections **XXXX** of the Emission Standards and Test Procedures by performing an engine family modification (i.e., a change such as a running change involving a physical modification to an engine, a change in specification or setting, the addition of a new configuration, or the use of a different deterioration factor), all previous sample size and Cumulative Sum statistic calculations for the model year will remain unchanged.

(iv) A failed engine is one whose final deteriorated test results pursuant to paragraph (b)(3)(C), for a regulated pollutant exceeds the designated emission standard for that pollutant.

(v) An engine family may be determined to be in noncompliance, if at any time throughout the model year, the Cumulative Sum statistic, C_i, for, a regulated pollutant is greater than the action limit, H, for two consecutive tests.

(vi) All results from previous quarters of the same model year must be included in the on-going Cumulative Sum analysis, provided that the engine family has not failed (e.g., if three engines of a family were tested in the first quarter, the first test of the second quarter would be considered as the fourth test).

(vii) If the Cumulative Sum analysis indicates that an engine family has failed, the engine manufacturer must notify the Chief of the Mobile Source Operations Division, in writing and by telephone, within ten working days. Corrective action will be taken as noted in paragraph (b)(4)(E), below.

(viii) If a manufacturer performs corrective action on an engine family and then resumes production, all previous tests will be void, and Cumulative Sum analysis will begin again with the next test.

(B) At the end of the quarter, or when the Cumulative Sum analysis indicates that a decision has been made, the manufacturer must provide all the data

accumulated during the quarter.

(3) Calculation and Reporting of Test Results.

(A) Initial test results are calculated following the applicable test procedure specified in "California Exhaust Emission Standards and Test Procedures for 2001 and Later Spark-Ignited, Gasoline-Powered Marine Engines."

(B) Final test results are calculated by summing the initial test results derived in paragraph (b)(3)(A) of this section for each test engine, dividing by the number of tests conducted on the engine.

(C) The final deteriorated test results for each test engine are calculated by applying the appropriate deterioration factors, derived in the certification process for the engine family, to the final test results, and rounding in accordance with ASTM E29-93a to the same number of decimal places contained in the applicable standard expressed to one additional significant figure. (ASTM E29-93a has been incorporated by reference.)

(D) If, at any time during the model year, the Cumulative Sum statistic exceeds the applicable action limit, H, in two consecutive tests, the engine family may be determined to be in noncompliance and the engine manufacturer must notify the Chief of the Mobile Source Operations Division and the Manager of the New Vehicle Audit Section, P.O. Box 8001, 9528 Telstar Avenue, El Monte, CA, 91734-8001, within two (2) working days of such exceedance by the Cumulative Sum statistic.

(E) Within 45 calendar days of the end of each quarter, each engine manufacturer must submit to the Executive Officer a report that includes the following information:

(i) The location and description of the engine manufacturer's or other's exhaust emission test facilities that were utilized to conduct testing reported pursuant to this section;

(ii) Total production and sample sizes, N and n, for each engine family.

(iii) The applicable emissions standards for each engine family.

(iv) A description of the process to obtain engines on a random basis;

(v) A description of the test engines or equipment (i.e., date of test, engine family, engine size, engine or equipment identification number, fuel system, dynamometer power absorber setting in horsepower or kilowatts, engine code or calibration number, and test location);

(vi) The date of the end of the engine manufacturer's model year production for each engine family;

(vii) For each test conducted,

(a) A description of the test engine, including:

(1) Configuration and engine family identification,

(2) Year, make, and build date,

(3) Engine identification number and explanation of the

identification code, and

(4) Number of hours of service accumulated on engine prior to testing;

(b) Location where service accumulation was conducted and description of accumulation procedure and schedule;

(c) Test number, date, test procedure used, initial test results before and after rounding, and final test results for all exhaust emission tests, whether valid or invalid, and the reason for invalidation, if applicable;

(d) The exhaust emission data for CO, NOx and HC for each test engine or vessel. The data reported must provide two significant figures beyond the number of significant figures in the applicable emission standard.

(e) The retest emissions data, as described in Paragraph (b)(3)(E)(viii)(d) above for any engine or vessel failing the initial test, and description of the corrective measures taken, including specific components replaced or adjusted.

(f) A complete description of any adjustment, modification, repair, preparation, maintenance, and/or testing that was performed on the test engine, was not reported pursuant to any other part of this article, and will not be performed on all other production engines;

(g) A Cumulative Sum analysis, as required in paragraph (b)(2), of the production line test results for each engine family;

(h) Any other information the Executive Officer may request relevant to the determination whether the new engines being manufactured by the engine manufacturer do in fact conform with the regulations with respect to which the Executive Order was issued;

(viii) For each failed engine as defined in paragraph (b)(2)(A)(iv), a description of the remedy and test results for all retests;

(ix) Every aborted test data and reason for the aborted test.

(x) The start and stop dates of batch-produced engine family production;

(xi) The required information for all engine families in production during the quarter regardless of sample size; and

(F) Each engine manufacturer must submit a copy of the report that has been stored (e.g., computer disc), or may be transmitted, in an electronically digitized manner, and in a format that is specified by the Executive Officer. This electronically based submission is in addition to the written submission of the report.

(4) Procedures Applicable to All Production Line Testing

(A) Standards and Test Procedures. The emission standards, exhaust sampling and analytical procedures are those described in the Emission Standards and Test Procedures, and are applicable to engines tested only for exhaust emissions. The production line test procedures are specified in conjunction with the Emission Standards and Test Procedures. An engine is in compliance with these production line standards and test procedures only when all portions of these production line test procedures and requirements specified in Section **XXX** of the Emission Standards and Test Procedures are fulfilled, except for the provision that any adjustable engine parameters must be set to any value or position that is within the range available to the ultimate purchaser.

(B) Air Resources Board (ARB) personnel and mobile laboratories must have access to engine or equipment assembly plants, distribution facilities, and test facilities for the purpose of engine selection, testing, and observation. Scheduling of access must be arranged with the designated engine manufacturer's representative and must not unreasonably disturb normal operations (See Section **XX** of the Emission Standards and Test Procedures).

(C) Engine Sample Selection

(i) The engine manufacturer must randomly select engines according to Paragraph (b), as applicable, from each engine family for production line testing. The engines must be representative of the engine manufacturer's California sales. Each engine will be selected from the end of the assembly line. All engine models within the engine family must be included in the sample pool. Each selected engine for quality-audit testing must pass the inspection test, by being equipped with the appropriate emission control systems certified by the ARB. The procedure for randomly selecting engines or units of equipment must be submitted to the Chief, Mobile Source Operations Division, P.O. Box 8001, 9528 Telstar Avenue, El Monte, CA, 91734-8001, prior to the start of production for the first year of production.

(ii) (a) Prior to the beginning of the 2001 model year, if an engine manufacturer cannot provide actual California sales data, it must provide its total production and an estimate of California sales at the end of the model year. The engine manufacturer must also provide supporting material for its estimate.

(b) For the 2001 and later model years, engine manufacturers must provide actual California sales.

(D) Engine Preparation and Preconditioning

(i) No emissions tests may be performed on an engine prior to the first production line test.

(ii) The engine or vessel must be tested after the engine manufacturer's

recommended break-in period. The engine manufacturer must submit to the Executive Officer the schedule for engine break-in and any changes to the schedule with each quarterly report. This schedule must be adhered to for all production line testing within an engine family and subgroup or engine family and assembly plant as appropriate.

(iii) If an engine or vessel is shipped to a remote facility for production line testing, and adjustment or repair is necessary because of such shipment, the engine manufacturer must perform the necessary adjustments or repairs only after the initial test of the engine or vessel. Engine manufacturers must report to the Executive Officer in the quarterly report, all adjustments or repairs performed on engines or vessels prior to each test. In the event a retest is performed, a request may be made to the Executive Officer, within ten days of the production quarter, for permission to substitute the after-repair test results for the original test results. The Executive Officer will either affirm or deny the request by the engine manufacturer within ten working days from receipt of the request.

(iv) If an engine manufacturer determines that the emission test results of an engine or vessel are invalid, the engine or equipment must be retested. Emission results from all tests must be reported. The engine manufacturer must include a detailed report on the reasons for each invalidated test in the quarterly report.

(E) Manufacturer Notification of Failure

(i) The Executive Officer will notify the engine manufacturer that the engine manufacturer may be subject to revocation or suspension of the Executive Order authorizing sales and distribution of the noncompliant engines in the State of California of the noncompliant engines in the State of California pursuant to Section 43017 of the Health and Safety Code. Prior to revoking or suspending the Executive Order, or seeking to enjoin an engine manufacturer, the Executive Officer will consider all information provided by the engine manufacturer, and other interested parties, including, but not limited to corrective actions applied to the noncompliant engine family.

(ii) The Executive Officer will notify the equipment manufacturer that the equipment manufacturer may be subject to revocation or suspension of the Executive Order or penalized pursuant to Section 43017 of the Health and Safety Code. Prior to revoking or suspending the Executive Order, or penalizing an equipment manufacturer, the Executive Officer will consider all information provided by interested parties, including, but not limited to corrective actions applied to the noncompliant engine family.

(F) Suspension and Revocation of Executive Orders.

(i) The Executive Order is automatically suspended with respect to any engine failing pursuant to paragraph (b)(2)(A)(iv) effective from the time that testing of that engine is completed.

(ii) The Executive Officer may suspend the Executive Order for an engine family that is determined to be in noncompliance pursuant to paragraph (b)(2)(A)(v). This suspension will not occur before fifteen (15) days after the engine family is determined to be in noncompliance.

(iii) If the results of testing pursuant to these regulations indicate that engines of a particular family produced at one plant of a manufacturer do not conform to the regulations with respect to which the Executive Order was issued, the Executive Officer may suspend the Executive Order with respect to that family for engines manufactured by the manufacturer at all other plants.

(iv) Notwithstanding the fact that engines described in the application for certification may be covered by an Executive Order, the Executive Officer may suspend such Executive Order immediately in whole or in part if the Executive Officer finds any one of the following infractions to be substantial:

(a) The engine manufacturer refuses to comply with any of the requirements of this section.

(b) The engine manufacturer submits false or incomplete information in any report or information provided to the Executive Officer under this section.

(c) The engine manufacturer renders inaccurate any test data submitted under this section.

(d) An ARB enforcement officer is denied the opportunity to conduct activities authorized in this section and a warrant or court order is presented to the engine manufacturer or the party in charge of the facility in question.

(e) An ARB enforcement officer is unable to conduct activities authorized in paragraph (b)(4)(B) of this section because an engine manufacturer has located its facility in a foreign jurisdiction where local law prohibits those activities.

(v) The Executive Officer will notify the engine manufacturer in writing of any suspension or revocation of an Executive Order in whole or in part. A suspension or revocation is effective upon receipt of the notification or fifteen (15) days from the time an engine family is determined to be in noncompliance pursuant to paragraph (b)(2)(A)(v), except that the Executive Order is immediately

suspended with respect to any failed engines as provided for in paragraph (b)(4)(F)(i) of this section.

(vi) The Executive Officer may revoke an Executive Order for an engine family after the Executive Order has been suspended pursuant to paragraph (b)(4)(F)(ii) or (iii) of this section if the proposed remedy for the nonconformity, as reported by the engine manufacturer to the Executive Officer, is one requiring a design change or changes to the engine and/or emission control system as described in the application for certification of the affected engine family.

(vii) Once an Executive Order has been suspended for a failed engine, as provided for in paragraph (b)(4)(F)(i) of this section, the engine manufacturer must take the following actions before the Executive Order is reinstated for that failed engine:

(a) Remedy the nonconformity;

(b) Demonstrate that the engine conforms to the designated emission standards by retesting the engine in accordance with these regulations; and

(c) Submit a written report to the Executive Officer, after successful completion of testing on the failed engine, that contains a description of the remedy and test results for each engine in addition to other information that may be required by this part.

(viii) Once an Executive Order for a failed engine family has been suspended pursuant to paragraphs (b)(4)(F)(ii), (iii) or (iv) of this section, the engine manufacturer must take the following actions before the Executive Officer will consider reinstating the Executive Order:

(a) Submit a written report to the Executive Officer that identifies the reason for the noncompliance of the engines, describes the proposed remedy, including a description of any proposed quality control and/or quality assurance measures to be taken by the manufacturer to prevent future occurrences of the problem, and states the date on which the remedies will be implemented.

(b) Demonstrate that the engine family for which the Executive Order has been suspended does in fact comply with the regulations of this part by testing as many engines as needed so that the Cumulative Sum statistic, as calculated in paragraph (b)(2)(A)(i), falls below the action limit. Such testing must comply with the provisions of this Part. If the engine manufacturer elects to continue testing individual engines after suspension of an Executive Order, the Executive Order is reinstated for any engine actually determined to be in

conformance with the emission standards through testing in accordance with the applicable test procedures, provided that the Executive Officer has not revoked the Executive Order pursuant to paragraph (b(4)(F)(vi) of this section.

(ix) Once the Executive Order has been revoked for an engine family, if the engine manufacturer desires to continue introduction into commerce of a modified version of that family, the following actions must be taken before the Executive Officer may issue an Executive Order for that modified family:

(a) If the Executive Officer determines that the proposed change(s) in engine design may have an effect on emission performance deterioration, the Executive Officer will notify the engine manufacturer, within five (5) working days after receipt of the report in paragraph (b)(4)(F)(viii)(a) of this section, whether subsequent testing under this section will be sufficient to evaluate the proposed change or changes or whether additional testing will be required; and

(b) After implementing the change or changes intended to remedy the nonconformity, the engine manufacturer must demonstrate that the modified engine family does in fact conform with the regulations of this part by testing as many engines as needed from the modified engine family so that the Cumulative Sum statistic, as calculated in paragraph (b)(2)(A)(i) falls below the action limit. When this requirement is met, the Executive Officer will reissue the Executive Order or issue a new Executive Order, as the case may be, to include that family. As long as the Cumulative Sum statistic remains above the action, the revocation remains in effect.

(x) At any time after the suspension of an Executive Order for a test engine under to paragraph (b)(4)(F)(i) of this section, but not later than fifteen (15) days (or such other period as may be allowed by the Executive Officer) after notification of the Executive Officer's decision to suspend or revoke an Executive Order in whole or in part pursuant to paragraphs (b)(4)(F)(ii), (iii) or (vi) of this Section, an engine manufacturer may request a hearing as to whether the tests have been properly conducted or any sampling methods have been properly applied.

(xi) Any suspension of an Executive Order under paragraph (b)(4)(F)(iv) of this section:

(a) must be made only after the engine manufacturer concerned has been offered an opportunity for a hearing conducted in

accordance with all applicable requirements and;

(b) need not apply to engines no longer in the possession of the manufacturer.

(xii) After the Executive Officer suspends or revokes an Executive Order pursuant to this section and prior to the commencement of a hearing, if the engine manufacturer demonstrates to the Executive Officer's satisfaction that the decision to suspend or revoke the Executive Order was based on erroneous information, the Executive Officer will reinstate the Executive Order.

(xiii) To permit an engine manufacturer to avoid storing non-test engines while conducting subsequent testing of the noncomplying family, an engine manufacturer may request that the Executive Officer conditionally reinstate the Executive Order for that family. The Executive Officer may reinstate the Executive Order subject to the following condition: the engine manufacturer must commit to recall all engines of that family produced from the time the Executive Order is conditionally reinstated if the Cumulative Sum statistic does not fall below the action limit, and must commit to remedy any nonconformity at no expense to the owner.

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.

§4227. California Exhaust Emission Standards and Test Procedures for 2001 and Later Gasoline SI Marine Engines.

Test Procedures referred to in this chapter may be obtained from the State Air Resources Board at P.O. Box 8001, 9528 Telstar Avenue, El Monte, California 91734-8001.

NOTE: Authority cited: Sections 39600, 39601, 43013 and 43018, Health and Safety Code. Reference: Sections 43013, 43017 and 43018, Health and Safety Code.